UNITED
NATIONS

E

Economic and Social Council

Distr.
GENERAL

E/1992/46
2 June 1992

ORIGINAL: ENGLISH

Substantive session of 1992
Item 12 of the provisional agenda*

DEVELOPMENT AND INTERNATIONAL ECONOMIC COOPERATION

Main research findings of the system in major global economic and social trends, policies and emerging issues

Report of the Secretary-General

SUMMARY

In section VI of resolution 1986/51, the Economic and Social Council requested the Secretary-General "to submit to the Council, on a biennial basis, a summary of the main research findings of the system on major global economic and social trends, policies and emerging issues". The present report has been prepared in response to the Council request on the basis of information received from the concerned bodies of the United Nations system along with review of their major publications. It highlights findings published in the past few years, including some issues and projections of future conditions for the 1990s, and identifies areas warranting further analysis.

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INTRODUCTION

1. The two years that have elapsed since the preparation of the previous report of the Secretary-General on the subject (E/1990/81) have witnessed dramatic changes. The Middle East conflict sent shock waves throughout the region with significant, albeit unevenly distributed adverse effects on the world economy. Democratic pluralism swept eastern Europe along with German unification. The process of systemic change in that region has subsequently gained further momentum but uncertainty surrounds the future course of economic policy in the Confederation of Independent States (CIS). The Economic Community (EC) moved closer to political and economic integration, a process that has far-reaching implications for the world economy.

2. The gap between the richest and poorest countries is increasing and alarming levels of poverty persist within the developing regions. Reflecting a significant evolution in prevailing perceptions of economic and social governance for development, an increasing number of countries have launched major economic reforms. The world economy continues to be reshaped by less visible but pervasive and far-reaching concurrent processes of economic globalization and increased interdependence, as well as political fragmentation. At the same time, the earth's global life-support systems are increasingly strained by slowing but still high population growth rates and by the degradation of the environment and its adverse impact on development.

3. These themes, among others, as well as those global and regional concerns provide much of the underpinnings of the large body of ongoing policy research which has been carried out by the United Nations system in the past two years. As it is not feasible within the framework of such a report to present a comprehensive overview of the substantive results of this work, an effort will be made instead to highlight sectoral and intersectoral findings and to identify areas warranting further analysis.

I. GLOBAL OUTPUT AND POLICIES

4. World production significantly decelerated in the last two years. Already in 1990, after several consecutive years of expansion in the world economy, world production growth virtually came to an end amidst a growing number of signs pointing to slower economic activities in large industrial countries, which had further tightened monetary policies in response to production at near capacity and rising inflation. The slow-down was made more widespread and profound by the Gulf crisis. In 1991, economic activity further declined. For the first time since the end of the Second World War, total per capita and income output actually fell, and economic decline was so widespread and so deep in eastern Europe and the Soviet Union that it could not be counterbalanced by the positive impact of the more dynamic economies, principally those of China, Japan, several other Asian nations and a number of Latin American countries emerging from long stabilization and adjustment efforts. Global recovery is still expected to regain in 1992, but to be

rather slow. The volume of trade, while also decelerating, continued to grow, exceeding the growth of world output for the seventh consecutive year. The World Economic Survey, 1992, prepared in the Department of Economic and Social Development, analyses the policy implications of these trends for various groups of countries.

A. Policy issues of developed countries

5. The weak economic conditions in several industrial countries, the consequences of the conflict in the Middle East, fluctuation in the value of the United States dollar and concerns about financial fragility in several countries have raised important questions about the mix of monetary and fiscal policies conducive to achieving sustained growth over the long term. The question is important to the extent that the situation in the industrial world is characterized by sharply different cyclical positions among major countries. In addition, active macroeconomic management in the major industrial countries has been primarily undertaken by the monetary authorities and the primary focus of policy makers has been on containing inflation, at the expense, if necessary, of incomes, employment and growth. The International Monetary Fund (IMF) stresses that the achievement of sustained growth along with a lasting decline in interest rates would require fiscal policies directed at increasing national savings, particularly in those countries where budget deficits are high and national savings low. The Committee for Development Planning noted that the management of fiscal deficits has a direct and profound effect on the development prospects of developing countries as it is one of the factors determining the availability of resources for development.

B. Economies in transition

6. Eastern Europe and the Soviet Union experienced the largest decline in economic activity since the immediate post-war years. Severe economic disruption resulting from the revolution under way in the region resulted in an output estimated for 1991 at 10 per cent to 15 per cent less than in the previous year. It is quite possible that at the end of this decade in several countries of the region total output will still be lower than it was in 1980. Indeed, the euphoria which followed the revolutionary political changes in most of eastern Europe and the Soviet Union in 1989 has now given way to a sober appreciation of the economic and political problems of these countries arising from the virtual collapse of trade among the countries of the region, lower levels of fixed investment, inadequate macroeconomic stabilization and unprecedented levels of unemployment. The move from centrally planned to decentralized market economies is now seen more clearly as a task of enormous complexity, entailing intertwined political, social as well as economic issues. The Economic Commission for Europe (ECE) suggests that the minimum requirements that should be put in place would seem to be unambiguous anchoring of property rights, macroeconomic stabilization, price liberalization, corporatization and enterprise reform, the creation of a

social safety net and labour market reform, the establishment of a commercial banking infrastructure, and trade and foreign exchange liberalization. A diversity of approaches, however, has emerged in the countries in transition with respect to the sequencing and speed with which the various reforms need to be initiated and implemented. The World Bank suggests that the absence of markets for both capital and labour tends to increase the costs of stabilization programmes in terms of output and unemployment and argues that stabilization programmes and liberalization of the economy must be preceded by structural reforms. The Bank also stresses that price liberalization measures need to be complemented in the transition by institutions and incomes policy measures if inflation is to be controlled.

7. The United Nations Research Institute for Social Development (UNRISD) has proposed that the process of reform in eastern Europe should take place within the framework of an explicit social contract between management, labour and the State. This may in turn call for the establishment of clear entitlements, as citizenship rights necessitate the social planning of provision of basic needs.

8. The ongoing transformation of the former centrally planned economies into pluralistic market systems affects other parts of the global economy, including the developing countries. These questions are now the focus of considerable research work and have been reviewed in detail by the Committee for Development Planning. Yet the quality and quantity of available and comparable data on eastern Europe remain highly unsatisfactory. With a view to strengthening the information base for the economies in transition and helping policy makers at the international and national levels, the World Bank is investigating the determination of basic costs and prices, national accounting for private sector production and the measurement of growth and inflation during economic transition.

C. Policy issues in developing countries

9. Output in the developing countries increased by about 5 per cent in 1991, the same rate as in the past two years and only marginally above the growth rate of population, thus implying a less than 1 per cent increase in per capita output. Much of this low growth is the result of the continuing stagnation of output in large Latin American economies, but prospects have declined for a number of countries in other regions as well. Recent changes in the international environment favoured some developing countries, but were unfavourable to most, underlining considerable variations in their ability to adjust their economies and compete in a changed international environment.

10. The World Bank concludes that the plausible range of growth estimates for developing countries in the 1990s may extend from less than 3 per cent a year to well over 6 per cent. This range translates into a 40 per cent difference in the level of real income by the year 2000. The Bank also suggests that the divergent patterns of growth assured in the 1990s will probably continue into the next decade. Such a trend, added to the uncertainty about aggregate

growth, intensifies the risk that the number of absolute poor in the world will rise greatly.

11. The picture of stagnation, recession and inflation that has characterized most of the countries of Latin America and the Caribbean in recent years seems to have evolved somewhat. The majority of the economies of the region are now operating on new public policy foundations entailing a firmer orientation towards exports, trade liberalization, fiscal austerity, more prudent management of monetary policy and greater reluctance to resort to public regulation of economic activity. These public policy rules nevertheless appear to involve even greater inequality of income than in the past, a more precarious unemployment situation, and a lesser degree of freedom in the application of economic policy.

12. Owing primarily to adverse effects of the Gulf crisis, the GNP of the Western Asia region contracted by more than 5 per cent in 1990, after having registered a 3.34 per cent growth rate in 1989. Development prospects have been set back severely by the massive destruction of economic and social resources and infrastructure in Iraq and Kuwait, the reconstruction of which may cost an estimated $US 25 billion in each country; by the need to divert high resources to finance the war and strengthen defence capabilities; by the disruption of interregional trade, capital and labour flows; by increased problems associated with structural employment and unproductive unemployment and balance of payments and budgetary imbalances which remain a major feature of many countries in the region. Less apparent, but no less important, has been the adverse impact on regional cooperation which will require time and effort to redress.

13. The Gulf crisis, the breakdown of the trading system between the countries of the Council for Mutual Economic Assistance (CMEA) and the recession in developed countries contributed to a sharp deceleration of world trade, which was reflected in a slow-down in the rates of export growth from the developing countries of the region of the Economic and Social Commission for Asia and the Pacific (ESCAP). The Gulf conflict, with its adverse effect on oil prices, tourism and the flows of labour migration and remittances, placed an additional strain on many economies of the region, resulting in a worsening balance-of-payment situation and a reduction of 1 to 2 per cent in the potential GNP of some of the worst affected countries. Natural disasters of unprecedented magnitude in several countries compounded these problems. The region's average rate of economic growth thus slowed during 1989 and 1990. The greatest deceleration was experienced by some of the highly export-oriented economies of the region. In spite of the unfavourable outlook for the world economy, the performance of the economies in the ESCAP region is likely to remain relatively strong, with the possibility of some of the more dynamic economies becoming overheated. As argued in a study by ESCAP, the changing global and economic situation focuses attention on the need for improving domestic as well as international competitiveness as a key concern in fostering industrial restructuring and social change.

14. In Africa, agriculture constitutes about a third of the GDP of the region. Good weather conditions in 1991 led to higher growth in agricultural output, and overall growth is estimated to have improved to 3.5 per cent that year. Many countries have changed their development strategies considerably. The general trend has been to reduce deficits by rationalizing public spending. The result of structural adjustment programmes have generally been favourable in agriculture but in other sectors, particularly in industry, have been far less clear. Most of these countries suffer from serious structural weaknesses, and policy reforms have yet to translate into sustained growth. Conflict and civil strife remain a major obstacle to economic and social progress. When accompanied with drought, the risk of famine is high.

D. Agriculture and other commodities

15. At the global level, the second part of the 1980s was a period of faltering agricultural output, especially for developed countries, while growth in food and agricultural production varied widely in developing countries. At the regional level, the overall pattern was one of sustained albeit slower growth in Asia; mediocre performance in Latin America and the Caribbean where production lagged behind population growth; marked instability in the Near East with virtually no progress overall; and a disquietingly poor record in Africa where production growth fell below the already inadequate levels of the early 1980s.

16. The overall economic environment has been generally unfavourable to agriculture in both 1990 and 1991. The economic slow-down under way in industrialized countries was accentuated by the effect of the Gulf crisis. Agricultural systems were adversely affected by slower growth of world imports demand and higher oil and energy prices. While countries and regional experiences varied widely, countries primarily relying on agriculture as a source of growth and export earnings were among those most severely affected.

17. Current estimates of food and agricultural production in 1990 indicate an increase of around 1.5 per cent over 1989. This increase represents a significant slow-down from the high growth rate of 3.2 per cent in 1989 (3.6 per cent for food) to one below both the average for the decade of 2.1 per cent and the 1985-1990 average of 1.7 per cent.

18. The slow growth in developing countries' food production in 1990 is reflected by the large number of countries which experienced declines in per caput food production. This is most evident in Africa where 35 of the 45 countries in sub-Saharan Africa recorded declines in per caput food production. In Latin America and the Caribbean, two thirds of all countries failed to increase food production in line with population growth. A majority of Asian countries also failed to raise their food production per caput in 1990.

19. World cereal production in 1990 increased for the second consecutive year to record levels. Cereal production in developing countries is estimated to

have increased by a modest 1.5 per cent, concentrated primarily in Asia. As global cereal output exceeded consumption in 1991-1992 for the first time since 1986-1987, world cereal stocks increased but are considered only minimally above "safe" levels. Cereal production rose at the world level due to good harvests in Asia, Central America and North America, while yields fell in 1990 in sub-Saharan Africa, South America and western and eastern Europe. Africa's food supply situation remains the most precarious, with 17 countries having experienced severe food shortages in 1991. In addition, while per capita food availability has continued to increase for the developing countries as a whole, the increase was slower in the 1980s than in the previous two decades. The situation for sub-Saharan African countries worsened to the extent that per capita food availability in 1988 was less than it was in 1970. The gap between food production and food consumption needs has had to be increasingly met by food imports, including food aid.

20. The 1980s witnessed a considerable contraction of the share of commodities in world trade. The decline of almost 40 per cent was mainly a consequence of falling prices. Commodity prices have generally been on a declining trend during the 1980s. In real terms, the prices of all commodities, except for bananas, manganese ore, nickel, tropical timber and zinc, declined. Real prices of non-fuel commodities slid by about 30 per cent, with the two extremes of tropical beverages which plummeted most (by some 50 per cent) and minerals and metals faring best with a decline of only 7 per cent. The real price of crude petroleum collapsed by about three fifths during the decade.

21. After an increase in 1988 from the historic lows of the mid-1980s, commodity prices reached a plateau in 1989 but declined again in 1990. The combined dollar price index of non-fuel commodity exports of developing countries declined by about 6 per cent in 1990. In real terms, commodity prices declined even more sharply, bringing down the average real prices of non-fuel commodities close to 1987 levels, the lowest since the 1930s. There was little sign of recovery in 1991.

22. During 1975-1988, virtually all developing countries experienced shortfalls in their commodity-related export earnings and total annual shortfalls in the 1980s were higher than those in the 1970s. The average annual shortfall for non-fuel commodities (mainly cereals, cocoa, coffee, cotton, sugar, tropical timber, tin and vegetable oil) was over $US 6.1 billion.

23. Falling export revenues from commodities and the declining share of developing countries in world trade contrast with a still strong dependence on commodities for production, employment and export earnings in most countries of the South. Only the countries of South and South-East Asia have managed to decrease their reliance on commodities. Heavily commodity-dependent countries showed not only a poorer growth performance than others, but their growth in investment was also lower, their inflation higher and their foreign debt greater. These countries failed to translate increases in productivity into enhanced income, as the lion's share of productivity gains was absorbed by

sliding commodity prices. In consequence, the commodity sector ceased to act as an engine for development. The results of an investigation by the United Nations Conference on Trade and Development (UNCTAD) call into question the validity of a number of well-established hypotheses on commodity demand. First, the thesis of an uncoupling of commodity demand from economic growth appears unfounded. Secondly, there is little evidence to suggest that the decline of material consumption per unit of GDP has accelerated its pace in developed countries in the wake of the oil price hikes of the 1970s. Thirdly, intensity of material use seems to fall gradually as a function of the widespread introduction of results of technological progress. The slow-down in demand for commodities since the late 1970s thus poses a question as to whether the brisk demand growth of the 1950s and 1960s on the heels of rapid economic growth in the post-war period should not be considered as exceptional.

24. On the basis of a statistical analysis of diversification of 86 developing countries, an UNCTAD study showed that the extent of their export diversification had been quite limited. For two thirds of them, commodity dependence had not declined or had actually increased.

E. Transnational corporations

25. In the 1990s, transnational corporations are likely to play an increasing role in the world economy and in the competitiveness of nations. In part, this is due to the rapid growth of foreign direct investment in the 1980s when it averaged 30 per cent a year, driven by a continuation of macroeconomic and firm level factors that are likely to continue, if not accelerate, in the 1990s. World-wide flows of foreign direct investment continued to grow rapidly towards the end of the 1980s, reaching a level of nearly $200 billion in 1989. Of total flows $163 billion were invested in developed countries and $30 billion in developing countries. Ten developing countries accounted for three fourths of total inflows to developing countries. In this context, the growth of foreign investment in developing countries in Asia and more recently, Latin America and the Caribbean, is an important development. In addition, a number of developing countries in Asia are themselves becoming important home countries to transnational corporations. Foreign direct investment (FDI) in the countries of central and eastern Europe continues to show signs of growing, but foreign investment in Africa and the least developed countries continued to stagnate.

26. The most important determinants of FDI are the specific assets underlying the competitive advantages of transnational corporations, their ability to gain from internalizing market relationships, the strengths of particular host countries as location for foreign production by transnational corporations and policies of host and home countries. Host country policies provide a necessary precondition for FDI, but effective policies by themselves are not enough to stimulate larger inflows of FDI. A World Bank study of Germany as a source country whose share of FDI stocks in developing countries decreased from 20 per cent in 1976 to 12 per cent in 1988, found that market size and import penetration were important driving forces for German FDI in developing

countries, while existing FDI abroad does not significantly affect exports to the recipient countries. As a consequence, trade barriers are an obstacle rather than a supportive element for German FDI. Empirical evidence suggested that efficient guarantee schemes might be a better way to encourage FDI flows to developing countries than generous tax exemptions, which are costly for some developing countries. Case-studies of the experiences of Malaysia and Brazil indicate that the availability of a skilled and relatively low-cost labour force and the existence of supportive physical infrastructure have been important factors attracting export-oriented transnational corporations.

F. Trade

Trade flows and balances

27. The slight deceleration in the growth of world trade since 1988 has reflected mainly a somewhat slower expansion of output in developed countries, but also the important decline in the growth of output and imports in some of the more industrialized developing economies in South-East Asia and continued stagnation in others. In many developing countries, supply side factors also contributed to the export slow-down. In the case of several countries in eastern Europe exports fell largely on account of supply problems. A revitalization of growth in the developing world and the reconstruction of eastern Europe would thus have very favourable effects on the evolution of world trade and world economic growth.

28. The developed market economies buy more than two thirds of the world's exports. Eastern Europe and the Soviet Union account for less than 10 per cent of world imports, and the share of the developing countries is less than one quarter. In 1980, the developing countries had purchased almost 30 per cent of the total. This reflects the changing fortunes of the oil-exporting countries and a decade of constraints on the growth of imports and output in Africa and Latin America. Only developing Asia has seen its share of world imports grow over the 1980s. Thus the growth of world exports in 1990 was concentrated on expanding sales to developed market economies, to developing Asia and to the oil-exporting countries whose export revenues rose on the strength of oil price increases in 1989 and 1990.

29. South-South trade in the 1980s tended to stagnate in terms of value and decline as a percentage of world trade as a result of the collapse of commodity prices, the rising cost of servicing external debt and a strong contraction in commercial credits. The 1980s were characterized by a clear shift in the direction of the export trade of the developing countries towards the markets of the developed world, arising from the rapidly contracting real import demand in Latin America and Africa linked with increases in the competitive position of South and South-East Asia on world markets.

30. UNCTAD studies of obstacles to South-South trade focus attention on the ad valorem incidence of transport cost on trade among developing countries, which is higher than on trade with the developed countries, and the lack of

marketing skills, market knowledge and access to channels of distribution necessary to mount export drives in new markets.

31. Problems encountered by the majority of developing countries in the early 1980s led them to shift their priorities from long-term development and integration efforts to short-term balance-of-payments considerations at the expense of regional preferential arrangements. Moreover, trade liberalization measures included in programmes of structural adjustment brought about further erosion of regional margins of preferences. Underlying factors of trade control measures as well as resource and factor endowments were also at play.

Trade effects of changes in central and eastern Europe

32. The changes taking place in countries of central and eastern Europe and the former USSR are affecting commodity trade among them as well as their trade with the rest of the world. Recent developments paint a rather pessimistic picture of a sharp decline in imports, at least in the short term, owing to a severe contraction in industrial activity and a severe shortage of foreign exchange. These trends seem likely to continue during the transition period, despite the low current per capita consumption levels especially for tropical fruits and beverages, unless, inter alia, new forms of cooperation between producers and consumers of these countries are used to compensate for the lack of foreign exchange. In the medium to long term, the resumption of economic growth in the countries of central and eastern Europe and the former USSR, combined with trade liberalization and currency convertibility, should lead to a growth in trade in commodities with the rest of the world which could well exceed the growth in their economies. Those commodities with relatively high income elasticities of demand in the region, such as tropical products, would be in the best position to benefit. For agricultural raw materials, the relatively low consumption levels for certain commodities indicate a potential for substantial increases in demand in the longer term, for example, for natural rubber.

33. UNCTAD studies further suggest that, in the short term, countries in central and eastern Europe are unlikely to generate competitive exports that are sufficiently large to replace exports from developing to developed countries on a substantial scale. Over the medium term, structural changes in countries in central and eastern Europe could move export production to a greater extent into sectors in which developing countries have established export supply capabilities. Competition could increase in some commodity and manufacturing sections.

National trade policies reforms

34. Since the early 1980s, a growing number of developing countries have pursued policies aimed at increasing the openness of their economies. Their experience seems to show that a phased process of import liberalization, with due attention paid to building up supply capabilities, is likely to lead to more successful structural adjustment than a rapid and broad-based liberalization of imports. As the number of countries adopting trade

liberalization and export-promoting strategies grows, so does the need for developed countries to preserve open markets or improve market access conditions for the exports of developing countries. This would be facilitated by the adoption of positive structural adjustment measures and mechanisms.

35. UNCTAD has assessed the experience of developing countries in trade policy reform. The experience of Brazil, Chile, Malaysia and Turkey suggests that import liberalization is not a necessary precondition for export growth. While export incentives were important, the maintenance of a competitive real exchange rate was also crucial in these countries' export success and structural adjustment. In Cape Verde and Senegal, trade reforms have yielded limited results in terms of economic growth, suggesting that "getting prices right" is an insufficient condition for success. Weak supply responses, inadequate infrastructure and limited organizational capabilities have blunted the effectiveness of changes in price incentives, effected through either traditional trade policy instruments or the exchange rate. The experience of these two countries also underlines the fact that a paucity of human resources can be a serious impediment.

Trading blocs

36. Increasing concerns have been voiced over the possible splintering of the global trading system into a number of large blocs. A sizeable share of world trade is already taking place within blocs. The question today is not whether these blocs will be formed but rather how encompassing they will be and how to ensure that they will not harm the trading system. The Committee for Development Planning concluded that bloc trading usually gives rise to both trade creation and trade diversion. Members' gains overall depend on which of the two predominates and whether such factors as economies of scale and specialization, increased productive efficiency and gains in export markets and improved terms of trade apply. In the view of the Committee, a realistic approach to regional blocs would require a great deal of preparation if expected gains were to be realized. A careful analysis of actual and potential costs and benefits to those within a bloc and those not included within it would be necessary to ensure equity and growth. One of the main conclusions of an ECE study of the impact of the 1990 free trade agreement between Canada and the United States is that the short-run effects on GDP and other economic variables in Canada and the United States are unlikely to be large. Also, adverse effects on third countries, in aggregate, are likely to be small or non-existent. However, significant trade diversion effects do seem possible for motor vehicles and parts, and for textiles and clothing. Western Europe may be affected in the former sector but, in general, the main impact is likely to fall on Japan and the developing countries.

II. DEBT ADJUSTMENT, GROWTH AND HUMAN RESOURCE PROTECTION AND DEVELOPMENT

37. The external debt of capital-importing developing countries reached a new peak of $1.2 trillion in 1992 after remaining practically unchanged during the period 1987-1989. The increase in the stock of debt was due not to any

substantial expansion in the flow of lending to developing countries but rather to the 1990 weakening of the dollar. Net lending was only $8 billion more in 1990 than it had averaged in the two previous years. In fact, for much of the decade, the overall picture has been one of stagnation in real aggregate net resource flows and, more significantly, of negative net transfers to developing countries which reached $27.1 and $21.7 billion in 1989 and 1990.

38. Debt owed to official creditors continued to represent an increasing share of debt of developing countries, as private creditors, particularly commercial banks, were systematically reducing their exposure to heavily indebted countries. By October 1990, the total amount of official debt cancelled had come to almost $11 billion, but the total debt forgiven has increased substantially since then as creditor countries implemented outstanding commitments and announced new initiatives. Until recently, there has been relatively little debt forgiveness extended to middle income countries. Rescheduling, as opposed to writing off debt, is usually negotiated at the Paris Club. Only 7 agreements were negotiated with developing countries during the last quarter of 1990 and the first two quarters of 1991, compared with 23 agreements signed over the same period in 1989-1990. Private debt has also been cut down through a series of conversions and repurchases, usually at a considerable discount, and in some cases through non-renewal to debtor countries themselves of certain credit lines when those reach maturity.

39. The ratio of external debt to exports improved for various groupings for developing countries in 1990, largely on the strength of higher petroleum export earnings. The ratio of external debt of capital-importing developing countries to gross national product, which had declined during 1988-1989, increased during 1990 and for sub-Saharan Africa reached a new peak of 102 per cent.

40. Net overall debt reduction with respect to debt owed to commercial banks was no more than 3 per cent of the 1989 long-term debt for Mexico and Uruguay and in fact raised the debt outstanding for the Philippines and Venezuela. Interest saving obtained has thus been below expectations and, except for Costa Rica, represented only 5 to 8 per cent of those countries' total 1989 interest bills. It is estimated that total annual debt service relief over the next four years within the framework of the Brady Plan could range from about 2 to 6 per cent of those countries' 1989 gross national product. In addition, results so far are mixed as to whether restructuring arrangements have contributed to the acceleration of those countries towards renewed access to private market lending as a significant source of net capital inflows and new financial transfers. There seems to be room, therefore, to improve the effectiveness of the current debt strategy by raising the scale of debt reduction and enlarging the scope of debt eligible for restructuring.

A. Macroeconomic and structural issues

Debt adjustment and growth policy

41. As the debt crisis is entering its second decade, it is clear that the debt strategy has evolved considerably from a misconceived diagnosis of the balance-of-payments difficulties of heavily indebted countries to acceptance of the idea that long-term relief is a necessary component of the debt-management strategy. Reduction of the debt burden by itself was never thought to be sufficient to reverse the dismal economic performance of debtor countries. Changes were also required in domestic policies and sound stabilization programmes were understood to have a better chance to succeed when supported by adequate external financing and a dynamic international economic environment.

42. The effectiveness of the current more structural approach to overcoming the debt crisis is still a matter of controversy. The debate on stabilization policies has focused in particular on the following themes, which were analyzed in depth in the report of the Secretary-General on economic stabilization programmes in developing countries (A/46/385) and in the World Economic Survey, 1990: policy shocks versus gradualism; scope versus intensity of policy reforms; sequencing of policy reforms; permanent fiscal adjustment and public sector reform; coordination of private sector investment decisions; public investment in infrastructure; sectoral policies; policy stability and sustainability; temporary price controls and income policies; nominal anchors and financial safety nets; debt reduction for low-income and middle-income countries; and special problems of formerly socialist economies.

43. According to the World Bank, it appears that countries that are more open are likely to be subject to shocks of larger magnitude, but are also likely to adjust more quickly and effectively. The Bank also underlines the fact that the "adjustment-with-growth" packages advocated by adjustment lending programmes have been much more successful in developing countries that export manufactures than in those that concentrate on primary exports; the latter have not resumed sustained growth, and most of their external adjustment has arisen from expenditure reduction, not from an increase in supply. The longer-term prospects for exporters of manufactures are also brighter; in these countries there are signs of increased efficiency and a smaller decline in investment than in primary exporters. But a high external debt burden and an unstable economic environment impede investment in all developing countries. In the longer term, adjustment-with-growth packages will succeed if they are accompanied by a more stable macroeconomic environment and appropriate debt relief.

44. The Bank suggests that cross-section correlations of fiscal balances with macroeconomic variables are surprisingly strong. Stable and low fiscal deficits are associated with good growth performance. Fiscal balances are positively related to investment and to current account balances. High fiscal deficits show an association with highly negative real interest rates

(financial repression), money creation and high black market exchange rate premiums. The aggregate of the 10 case-studies shows an association between fiscal adjustment in the 1980s, current account improvement and real depreciation.

45. The Committee for Development Planning stressed that what is primarily required is not a sizeable reduction of public deficits through expenditure cuts, notably those relating to public investment in physical capital and in human resources, but a shift in expenditure composition on programmes relating to education and health and those designed to satisfy the basic needs of the poorer segments of the population.

46. The United Nations University's World Institute for Development Economics Research (UNU/WIDER) has carried out a study drawing in part from the Sri Lanka adjustment experience, recommended that international agencies should encourage member countries requesting financial assistance to submit their own programmes of adjustment, and that they base lending decisions on their assessment of the debt-servicing capacity and financial management of borrowers, with conditionality being normally confined to factors bearing in these two areas.

Financial flows

47. Developing countries have been faced with a much reduced supply of foreign funds from such sources as commercial banks and stagnating official development assistance (ODA). Net official development finance increased in current dollars from $45 billion in 1981 to $69 billion in 1989. While ODA has been growing in nominal dollar terms in the 1980s, it has been stagnant in real terms. Moreover, the ODA/GNP ratio has remained stagnant over the past five years, fluctuating between 0.36 and 0.33 per cent of GNP.

Public expenditures and deficits

48. Central government expenditures as a percentage of GNP for the developing countries as a group was 26.5 per cent in 1987, with an increment of 4.9 percentage points from 1972. In comparison with the situation in a developed market economy, the proportion of functional categories of central government expenditures is higher in economic services but lower in housing, amenities, social security and welfare in the developing countries. Both within developed and developing countries, rigorous structural adjustment was not accompanied by drastic change in the functional structure of central government outlay between 1972 and 1987.

49. Capital and current budgets in most developing countries came under increased pressures throughout the 1980s. The chronic trend of budget deficits, averaging close to 5 per cent of the GDP between 1981 and 1989, suggests that they will continue to pose a major problem for economic policy in most developing countries in the 1990s, although many countries have made efforts through structural adjustment to contain these deficits.

Security disarmament and resources for development

50. A major factor influencing deficit creation has been the increase in recurrent expenditure emanating from past capital expenditures. The other major factor has been the large increase in defence expenditures, which is particularly destructive for poverty-ridden developing economies. The United Nations Development Programme (UNDP) estimates that if industrial countries were to reduce their military spending by 3 per cent a year, this could provide $25 billion a year. In addition, if developing countries merely froze their expenditures at current levels, this could yield potential future increases of over $10 billion a year. The high military expenditure in many developing countries especially relative to social expenditure, its resilience to budgetary stringency and its importance for external debt are among the issues being systematically examined by the World Bank. The economic implications of current agreements and regulations on disarmament, particularly the link between disarmament and development and the idea that disarmament would yield automatic returns, are critically assessed in a study by the United Nations Institute for Disarmament Research (UNIDIR). Another UNIDIR historical and comparative study of the relationship between military industrialization and economic development shows that this relationship is variable and context-dependent.

Savings, financial development and entrepreneurship

51. Domestic savings as a ratio of GDP for the low- and middle-income group of developing countries were 25 per cent in 1987, indicating an increase of 7 percentage points from 1965. This reflects more availability of domestic resources for investment. Public savings in developing countries were consistently negative; based on regional average in 1987. Public savings as a percentage of GDP were -7.7 per cent for the low- and middle-income group in 1987. For countries where the record of formation of private savings is poor, this shortfall of public savings is indeed critical.

52. UNDP found that nearly $50 billion a year (about 2 per cent of the GNP of the developing countries) could be released for more productive purposes. As pointed out earlier, much of this could come from freezing military expenditures, which absorbs 5.5 per cent of the GNP of the developing world. Added savings could come from halting capital flight, combating consumption, reforming public enterprises and reducing internal policing. Important amounts of resources could become available if external and internal debt were reduced.

53. The World Bank is carrying out research on how access to affordable credit can remove the obstacle of low savings for the poor and help their income and employment by examining the cost structures of three credit programmes in Bangladesh, their estimated effects on households, and on the members of households, and the distribution of such effects by gender. Ultimately, this project is intended to ascertain the modalities of group-based credit programmes and their sustainability.

B. Adjustment and human resource protection and development

54. UNDP found that, judged by basic human development indicators, development has had successes over the past three decades. Average life expectancy in the developing countries increased by 16 years and adult literacy by 40 per cent. However, the review of global statistics also showed that the backlog of human development is still enormous.

55. In part as a result of the impact on social conditions of structural adjustment programmes, there has been a significant increase in attention to social services in the economy. A World Bank study underlined that the poverty costs of adjustment are not simply a short-term problem and that adjustment programmes need to be designed to protect the poor's living standards from the adverse effects of austerity policies and to increase the productivity of the poor so that they will contribute to growth. In more general terms as evidenced by the World Development Report, 1991 of the World Bank, State of the World's Children of the United Nations Children's Fund (UNICEF) and issues of the Human Development Report of UNDP, there is a confluence of opinion that economic growth and human well-being should be pursued simultaneously and that the two are mutually reinforcing. Primary health care and primary education are two of the most important ways of "investing in people". Nevertheless, UNICEF studies show that of 23 developing countries for which comparable figures are available, only three Governments allocate more than one fifth of their expenditures to these basic services. Similarly, at the international level, only about 15 per cent of all bilateral and multilateral aid goes to health and education and to population programmes and only about 2 per cent goes to primary health care and primary education.

56. Current shifts in development thinking have rekindled the debate concerning the proper role of Governments in the process of development. In its World Development Report, 1991, devoted to the themes of direct poverty reduction, the World Bank articulated the view that the Government's proper place is in the area of social investment rather than economic management. In this connection, the report compared the growth record of individual developing countries over the last 20 years. Taking price distortions as a measure of "market interference" and education as a measure of "investment in people", the Bank concluded that countries that did badly on both criteria grew, on average, by 3.1 per cent a year; those which did well on only one of the criteria grew by 3.8 per cent a year; and those which performed well against both criteria had a much more impressive growth rate of 5.5 per cent a year. Other studies have shown nevertheless that Governments' selective interventions in markets can make important contributions to raise competitiveness and dynamism in the economy. Such is the case in particular in Hong Kong, Japan, the Republic of Korea, Singapore and Taiwan Province of China, where Governments have harnessed private enterprise to an overall development strategy.

Poverty and related social conditions

57. Global poverty remains the most pressing problem and serious challenge of our times. Estimates put the number of poor at over 1 billion, some one third of the total population of developing countries. Almost one half of these are in South Asia, 25 per cent in East Asia, and 16 per cent in sub-Saharan Africa. In terms of the incidence of poverty, around one half of the population in the South Asian and sub-Saharan regions are defined as poor. As disturbing as the level of poverty is the fact that the total number of poor has increased in most developing countries in the last decade, particularly in Africa and Latin America. Real income of workers, both wage earners and the self-employed, has fallen by as much as 30 to 40 per cent in these regions since the beginning of the 1980s. In effect, the global recession and adjustment programmes have added a new layer of poverty to the "structural poverty" that previous development had failed to eradicate.

58. In sub-Saharan Africa, the 1980s witnessed a process of informalization of labour markets, with an increasing proportion of economic activity taking place outside the formal sector, while conditions of employment in the formal sector itself dramatically deteriorated. These trends have exacerbated the problem of poverty more often in urban than in rural areas.

59. In Latin America, the rate of job creation in the modern sector fell, while the non-agricultural informal sector accounted for 45 per cent of new urban jobs created during the 1980s. Jobs also tended to become more precarious. The deterioration in the quality of employment was accompanied by a drop in wage income. The informalization of production and the deterioration in income had a negative impact on poverty levels and on the distribution of income. In sharp contrast to Latin America and Africa, the growth performance of the Asian economies in the 1980s was impressive, and by and large they adjusted more quickly and less painfully to external shocks.

60. Studies of the International Labour Organisation (ILO) point to the need for continuing work on improving the design and implementation of structural adjustment and economic transition programmes with respect to minimizing their negative impact on employment and poverty. The challenge is to avoid treating employment and poverty issues as exogenous outcomes to be dealt with ex post facto through temporary relief measures. What is required is to endogenize employment and poverty issues into the policy formulation process.

61. A further lesson is that new forms of social insecurity and an aggravation of poverty represent more than a problem of transition and the handling of adversely-affected groups in the transition process. The larger problem is that of building new forms of economic and social regulation and schemes of social protection that are compatible with the demands of efficiency, a lower level of State intervention and the assurance of basic levels of social security on a continuing basis.

62. The World Bank stressed that, taking into account growth performance within a country over time, growth and poverty alleviation are positively associated.

Hunger and food security

63. There has been a resurgence of famine, particularly in Africa, as a result of drought, civil strife and war. The Office of the United Nations High Commissioner for Refugees (UNHCR) notes that the number of refugees world wide has surged to 17 million, only surpassed by an even larger number of displaced persons. The number of chronically hungry people continues to grow, surpassing half a billion, the vast majority of whom, perhaps 80 per cent, are the rural poor, though an increasing proportion live in urban areas, particularly in Latin America.

64. Looked at by region, the largest increases in the number of hungry people over the past decade have occurred in Africa, but the majority of the undernourished are still to be found in Asia.

65. By the year 2000, the number of hungry people in sub-Saharan Africa is projected to increase by at least another 25 million to total more than 165 million, possibly reaching 200 million. The "food gap" between domestic supplies and fast-growing demand could widen to 50 million tons. To fill this gap in basic food staples, Africa's own food production would have to reach more than twice the average growth rate of 1.7 per cent per annum, achieved over the period 1960 to 1985. Given the difficulty of reaching such a target, the food situation in sub-Saharan Africa can be expected to worsen as the decade progresses and most of the countries of the region are likely to be food-deficient by the year 2000.

66. The largest concentration of the hungry and poor will continue to be found in Asia, mainly in South Asia, and overwhelmingly in the rural areas. While the outlook for the year 2000 and beyond still foresees a reduction in the share of the hungry living in Asia, the total number could be only slightly lower (about 40 million fewer) than earlier projected, partly because of a recently revised assessment of the rate of fertility reduction.

Education

67. Over the long term there has been great success in rapidly raising school enrolment, especially at the primary level and in reducing illiteracy. Projections point to considerable progress in the 1990s, although the number of illiterates will continue to grow and the least developed countries will likely fall short of universal primary education by 2000.

68. By the year 2000, an estimated 912 million adults (15 years and over) will be illiterate, with more than 98 per cent of them living in developing countries. Asia will remain at the core of the problem with 693 million illiterates; Africa will have 168 million, and Latin America and the Caribbean region 38 million. These numbers indicate disproportionately high levels of women. A majority of the world's illiterates live in rural areas or urban slums and most live in poverty.

69. In the context of evolving developmental paradigms, increasing attention is being given to the linkage between macroeconomics and education sectors. Initial findings of various research reports by the World Bank show that earlier investments in education in Brazil contributed markedly to the country's rapid growth in the 1960s and 1970s, particularly as a threshold was passed of an average of three to four years of education of labour force members (suggesting positive externalities to higher average levels). Compared with the Republic of Korea, however, where educational opportunities grew faster, Brazil's relatively lower investments have implied greater inequality of income, due particularly to the high returns to the relatively few beneficiaries of post-primary education. In Malaysia, absolute poverty radically declined and income distribution improved during 1973-1987. An important determinant of this improvement was the education of females and their participation in the labour force.

70. Empirical evidence related to women's patterns of cash income spending and returns to education point to the desirability of giving greater priority to public education for women.

Health

71. Overall health status is well reflected by life expectancy at birth. On average, a newborn baby in one of the developed countries can expect to live 76 years, 26 years longer than a newborn in the least developed countries. Life expectancy for other developing countries typically lies between these two values, being closer to the developed countries for the countries of East Asia and most of Latin America. Life expectancy in eastern Europe is, on average, just over 70 years.

72. The relative differences in health status identified from the data on life expectancy mirror those from infant and child mortality. Thus the infant mortality rate for the least developed countries in 1988-1990 was almost 120 per 1,000, or 809 times higher than the rate for developed countries. Globally, the infant mortality rate fell from 76 per 1,000 in 1983-1985 to 68 per 1,000 in 1988-1990.

73. UNICEF has reported "fragmentary" evidence of rising infant mortality rates and low birth weights in parts of Latin America and in Africa south of the Sahara. So far, however, these have not been reflected in officially reported mortality rates. UNICEF has also shown that health and education services in central and eastern Europe have been subject to some of the deepest spending cuts and that the nutritional status of many children may already be threatened.

74. The success of the immunization efforts of the 1980s underlines the fact that there now exist economically feasible solutions to most of the health and nutrition problems that afflict millions of people in the developing countries. The per capita costs of these essential measures, as attested by UNICEF and the World Health Organization (WHO), are relatively low. The point is especially relevant to the containment and prevention of the AIDS pandemic

which has staggering financial and socio-economic implications. A cumulative total of 30 to 40 million human immunodeficiency virus (HIV) infections in men, women and children, 90 per cent of them in developing countries, has been projected by WHO for the year 2000.

75. The technical know-how to protect communities against such destructive forces is now available, though to very few. In spite of the relatively low costs, resource constraints have prevented many developing countries from committing extra resources to health care. That the modest resources needed for effective primary health care cannot be put together in many of their budgets highlights both the penury of resources as well as the need to attach greater priority to this objective.

76. The spread of cholera in the 1990s to the Americas emphasizes the fact that while the availability of safe water and adequate sanitation continued to increase, millions of people in the developing countries still do not have access to these two basic needs. WHO suggests that although globally by 1990, safe water supplies had been extended to 81 per cent of urban dwellers and 58 per cent of rural inhabitants, and adequate sanitation coverage was 71 per cent in urban and 48 per cent in rural areas, 1,500 million people still lack access to clean water supplies, and 2,000 million still live without adequate sanitation. In terms of relative need, Africa has the lowest rate of water coverage (44 per cent) while South and East Asia have the lowest sanitation coverage (20 per cent). In absolute terms, however, the needs are greatest among countries of South and East Asia, where more than 400 million people lack safe water supplies and over 1,000 million remain without adequate sanitation coverage. WHO is currently carrying out research concerning the various links between macroeconomic development, health care services and health status in countries in greatest need.

III. POPULATION AND HUMAN SETTLEMENTS

A. Trends in population growth, ageing and international migration

77. World population reached 5.4 billion in mid-1991, having doubled since 1955. Although population growth rates are decreasing in every region of the world except sub-Saharan Africa, in absolute numbers annual population growth is larger than ever. The most recent United Nations estimates suggest that world population growth may continue for another 150 years, much longer than previously expected. Well over 90 per cent of this growth will occur in what are now developing countries. Between now and the turn of the century, the population of industrialized countries will grow by only 56 million, or 5.2 per cent, while that of developing countries will balloon by over 900 million, or 24.6 per cent. The United Nations Population Fund (UNFPA) suggests that population intervention is both necessary and valuable.

78. Population ageing in the developing countries is likely to be much more rapid than it is in the developed ones. The average annual growth rate of the elderly population from 1985 to 2000 and from 2000 to 2025 will be 2.9 and 3.3 per cent, respectively, in the less developed regions compared to about 1.6 and 1.5 per cent in the developed countries, translating into an absolute increase of around 28 million elderly people per year in the developing world by 2025. This phenomenon will be even more dramatic in those developing countries which have already attained low fertility levels, as in the case of China.

79. Evidence about international migration still remains inadequate, in spite of the fact that the phenomenon has been growing. UNFPA emphasizes that the pressure of international migration from developing to developed countries built up during the 1980s and will continue to grow during the 1990s because of the rapid increase in the number of educated youth in the developing world, chronic inability of the labour market in many developing countries to absorb the growing number of educated manpower, and growing earnings differentials between workers in the North and the South. Findings show that nearly one out of every two of the world's international migrants is a woman. Female migration is becoming more visible, especially among South and South-East Asian migrants going to the Middle East.

80. A joint ILO/UNHCR project is being conducted with a view to developing a thematic and geographical knowledge base of international migration. While ILO will tackle such aspects as promotion of employment, social development poverty reduction, UNHCR will prepare studies on the possible interrelationships between international aid and strategies for prevention and solutions.

Urbanization

81. In the 35 years after 1950, the number of people living in cities almost tripled, increasing by 1.25 billion. In 1990, 2.4 billion people or 45 per cent of the world's population lived in urban areas. The world's urban population will rise to 3.2 billion in 2000, or 51 per cent of total world population, and by 2025 the world's urban population will be at 5.5 billion or 65 per cent of the global population.

82. The rapid growth of urban population is by now almost exclusively a developing country phenomenon in Africa, Asia and the Pacific, Latin America and the Caribbean, and the Middle East. The developing countries' share of the world's urban dwellers - 63 per cent in 1990 - will rise to 71 per cent in 2000 and 80 per cent in 2025. This growth has been far beyond anything imagined only a few decades ago - and at a pace that is without historic precedent. In addition to the growth of mega-cities, the growth of small- and medium-sized cities will also continue. Urbanization will perhaps be the single most important phenomenon transforming the economies and societies of many developing countries over the next 35 years.

83. Growth rates are expected to be fastest in Africa, where the urban population may double between 1985 and 2000. Absolute growth will be greatest in Asia, where cities will gain another 500 million inhabitants during the same period.

84. Most of this growth - two thirds of it in many Asian and Latin American cities, but less than one half in many African cities - will be due to the natural increase of populations already in the cities. The remainder will come from rural-urban migration, the incorporation of villages into expanding urban municipalities and the changing definition of settlements from rural to urban as they reach a given size.

Shelter and services

85. Urbanization has brought an alarming rise in the incidence of urban poverty, and it is estimated that by the end of the 1990s half of the absolute poor in developing countries will be concentrated in urban areas. Malnutrition and disease are critical problems in poor urban neighbourhoods and the rapid growth of urban population has led to environmental degradation, increasing strains on existing supplies of housing, urban services and infrastructure as well as to increasing demands for basic social services and facilities that few Governments in developing countries can meet.

86. If present policies on housing construction continue along with low investment and economic growth, little increase in the number of new permanent dwellings per new household can be expected in the low-income developing countries, and only a moderate improvement (one new unit for every two additional households) is projected in the middle-income countries by the late 1990s. In the high-income developing countries, the outlook is better, even with slow economic growth. The sheer magnitude of the costs involved points to the need for alternative mechanisms to meet the demand for other elements of urban infrastructure systems, such as water supply, drainage and solid waste management. The World Bank identified sanitation options that fall in between - in cost and level of service - conventional sewerage systems, which are expensive and unaffordable to the majority of urban populations, and on-site systems which can be inappropriate or unacceptable.

87. To the degree that cost recovery would allow Governments to extend water, sanitation and waste management facilities to expanding sections of cities and towns, more effective and appropriate means must be found to recover the costs of urban services. The use of cross-subsidies extend services in ways that involve or promote employment for community residents, thereby raising the income of poor families and increasing their ability to pay for service improvements.

IV. SCIENCE AND TECHNOLOGY

88. Scientific and technological research and innovation are major forces in the economic and technological development of virtually all societies today. At the same time, technological innovations represent the main causes of

economic and social destabilization as they affect established values in a given society and shape the growing needs and substance of development objectives. There is still, for example, much debate as to the impact and benefits of the Green Revolution in Asia. The historical record, however, shows that the Green Revolution helped bring about major increases in rice and wheat production and contributed to averting the massive famines predicted by many for the 1970s and 1980s. It has also helped to stimulate the region's economies in general and rural development in particular. Some countries have benefited more than others, and Green Revolution efforts are still expanding to some of those countries not reached before. The Green Revolution successes in Latin America and the Caribbean are reflected in the development of yield-increasing technologies for wheat and maize in Mexico and rice in Colombia. In Africa, despite early successes in developing hybrid and composite maize varieties in eastern and southern Africa, progress in increasing maize yields has been very uneven.

89. In particular, there has been much controversy about the Green Revolution's socio-economic benefits in terms of sustainable food security and poverty alleviation. The general conclusion is that neither the Green Revolution nor the slow spread of other agricultural technology has done much to reduce hunger and poverty. By focusing on rice and wheat at the expense of other foods of high nutritional value needed for balanced diets, the Green Revolution may even have created new nutritional risks for rural people. The Green Revolution as well as other research and technology experiences have left a considerable unfinished agenda to be addressed in the current decade, which revolves around three issues: technology, sustainability and equity.

90. Recent developments in biotechnology have raised new fears about further declines in developing countries' commodity exports and the ensuing effects on their economic development. UNCTAD estimates that the value of agricultural commodity exports to be affected within four to five years is US$ 20.9 billion for tissue culture techniques and US$ 6.4 billion for genetic engineering. The extent to which developing countries will actually benefit is a debatable question, as a major part of biotechnology R&D is done by private enterprises in developed countries. Intellectual property rights will be a significant factor in the diffusion of new techniques.

91. With respect to economic, commercial and developmental aspects of the industrial property system, studies suggest that reinforcement and expansion of intellectual property in isolation cannot create conducive conditions for technological transfer and development.

92. The newly established Institute for New Technologies (INTECH) of the United Nations University is carrying out multidisciplinary research that links technology policy to sectoral development policies on industrialization and agricultural development as well as "diagnostic" research in the experience of technology policy in developing countries. Specific studies in progress include an analysis of elements in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), that will affect the terms on which developing countries will get access to new technologies, including especially

trade in intellectual property, as well as new approaches to direct foreign investment and related matters; and an assessment of the implications thac economic crises and structural adjustment policies in sub-Saharan economies have had for technological institutions in these countries and for technological capacity.

93. Findings by the World Bank suggest that most of the technology institutions in developing countries, including in most newly industrializing countries, need to be completely redesigned; they need to become demand-driven, oriented towards applied research and training, and supportive of a dynamic private sector that is forced to compete and thereby to demand technological services. Likewise, the kind of education and training required in an industrializing developing country needs to be rethought particularly at the secondary and post-secondary levels.

94. UNCTAD suggests that the most successful industrializers in the developing countries have intervened heavily in building up technological capabilities, by establishing incentive structures in product markets to induce enterprises to increase capabilities; in factor markets to develop the capabilities to respond to the incentives; in the institutions to facilitate the functioning of markets. UNCTAD's analysis also highlights the importance for policies to foster interaction among incentives, capabilities and institutions.

95. Foreign affiliates of transnational corporations have made significant direct contributions to technological change and growth in host developing countries through increase in R&D expenditures, higher factor productivity and change in the composition of manufactured output and exports in favour of R&D intensive products. However, evidence of spill-over benefits arising from an integration with domestic economies, the stimulation of local R&D or technological alliances with local enterprises is mixed. Such benefits seem to depend on host countries' own technological competence, level of human resources development and entrepreneurial capacity.

V. ENVIRONMENT AND DEVELOPMENT

96. Individual countries, as well as the world community, have recognized the need for decisive and urgent action to prevent ecological disaster and to protect the life-sustaining qualities of the Earth. Threats to the environment arise from excessive demands made on it by a high level of consumption, soil erosion and destruction of forests to eke out a living by those whose consumption levels are very low, and the pressure of population on fragile ecosystems.

97. A study by the Department of Economic and Social Development found that despite considerable improvement in energy use, by the year 2020 economic growth as a whole will be accompanied by an increase of 90 per cent in the annual consumption of fossil fuels, which will result in increases of emissions of 93 per cent for carbon dioxide (CO_2), 80 per cent for sulphur

oxides (SOx) and 68 per cent for nitric oxides (NOx). Fossil fuel use and air emissions per unit of world output will be lower in 2020 than in 1990. Air emissions per unit of GDP will also decline in the developed regions, newly industrialized countries and China. However, they will increase rapidly in the other developing countries from 1990 to 2000, and then fall back almost to their 1990 level by the year 2000. However tentative such projections may be, corrective measures will in any case call forth a commitment of will and resources as well as technological innovation. The United Nations Conference on Environment and Development could be a major step forward towards achieving these goals.

98. UNCTAD studies show that a growth strategy based on commodity exports cannot be criticized from the sustainable development point of view, as long as there is a management policy that rationalizes and restricts the level and modes of natural resource exploitation. But in the present context of foreign exchange constraints, lack of investment and little alternative income opportunities for many developing countries, this is a difficult task and short-term needs and interests may easily lead to unsustainable practices, with the resulting tendency towards natural resource degradation and depletion.

99. Since free market forces alone do not adequately price environmental and natural resources, this will require substantial policy intervention in order to correct the divergence between private and social costs and send the appropriate price signals to economic agents.

100. There is no reason either to believe that trade liberalization will lead to unsustainable development. As long as all environmental resource costs are included in the costs of the products being traded, free trade should allow for improved access to markets. It should also allow for more international discipline in such trade distortive practices as agricultural subsidy programmes which often encourage overuse of fertilizers and pesticides, and it should contribute to diminish the dependence of developing countries on a few primary commodities. The conflict between free trade and the environment will only arise if poverty, debt and export pressures induce Governments to ignore the need to incorporate the full environmental costs into export prices.

101. National income accounting does not take into account many effects of production and consumption of the natural resource base, or in the case of exploitable resources, distinguish between two value added and sale of assets. The World Bank and the Statistical Division of the United Nations Secretariat are carrying out research on whether methods for improved accounting of natural resources and the environment can be developed and integrated accounts established that are flexible enough to be applicable for most major resource issues that countries face and that are useful for application by national income accountants and economists. Currently, the Bank is also assessing international response mechanisms and national ozone policies.

VI. CONCLUSIONS

102. The research work of the United Nations system in the last two years is to a large extent in a state of flux, reflecting the evolving development consensus. Empirical investigations are increasingly focusing on such questions as the nature, parameters and policy implications of the evolving concepts of growth and development, the establishment of conditions to redress the deterioration of the environment in a developmental context, and the improvement of the quality of life of populations. A large study of research is also now in progress on the political economy conditions of the transformation of productive structures with due regard to greater social equity and the consolidation of the democratization process, both of which are hypothesized to create new sources of economic and social dynamism. No simple and uniform substantive conclusion has yet emerged from this work on the basis of universally accepted or acceptable empirical evidence. This is hardly surprising in the light of the variety of prevailing approaches, methodologies and orientations. The decentralization of the United Nations system undoubtedly encourages this pattern of competing ideas and policy prescriptions and recommendations. Its beneficial effects are not to be underestimated, not only because it promotes a more effective monitoring and identification of emerging issues of global concern but also because it has contributed to significant improvements in programme elaboration and delivery. The marked evolution that has characterized the conception and implementation of structural adjustment programmes in the past few years in developing countries and, more generally, the growing concern for human development and preservation are cases in point.

103. At the same time, a number of subjects would seem to warrant further empirical investigation. Reference has been made, for example, to the need for more reliable and comparable data with respect to eastern European economies for the purpose of monitoring their transitional process and defining appropriate policies in support of their transition. Similarly, grass-roots participation is increasingly perceived as an important element of the development process. More needs to be known about the types of policies and actions that would be necessary to ensure a more effective use of human resources for capacity-building, self-reliance and sustainability in the development process. Major strides have been made in factoring environmental concerns into the development process. Nevertheless, the secretariat of the Conference on Environment and Development has suggested that there is a need for further multidisciplinary and intersectoral research in such areas as the linkages between poverty, changing consumption patterns and demographic dynamics; the promotion of sustainable agriculture and rural development; the protection of the quality and supply of fresh water resources; the environmentally sound management of biotechnology; the conservation of biological diversity; the environmentally sound management of solid wastes and sewage-related issues and of hazardous wastes; and the protection of seas and the atmosphere.

104. Finally, as evidenced by the pioneering research findings of such entities as UNU/WIDER and UNRISD in their respective areas, autonomous research institutes have generated fresh and new insights and information into major policy issues. The objectivity and impartiality of their research work can be of great value to intergovernmental deliberations. Their potential contributions could be further promoted through enhanced collaboration among them and greater synergetic relations with research-oriented units within the United Nations.

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